HAHN AND ASSOCIATES, INC.

ENVIRONMENTAL CONSULTANTS

February 15, 2018

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Northwest Region, Portland Office
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HAI Project No. 2708 DEQ ECSI File No. 84

SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and 7200 NW Front Avenue, Portland, Oregon

Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report to summarize Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of January 2018. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECVC-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

1. ACTIONS TAKEN UNDER THE VOLUNTARY AGREEMENT DURING THE PREVIOUS MONTH

Tasks related to maintenance of the HC&C system and the groundwater treatment system were conducted in January 2018, with the system operating in full long-term operational mode.

A total of 10,282,476 gallons of water were treated in the on-site groundwater treatment plant and discharged during January 2018 with all monitoring and reporting completed in accordance with the facility's NPDES permit.

The MW-6/MW-13 Fill Zone DNAPL Recovery system was re-started after the pumps were returned to wells MW-6-32 and MW-13-30 on December 13, 2017. The DNAPL recovery system had been off for an extended period of time while establishing a new vendor for recovered DNAPL-water mixture recovered from this system. Between December 13, 2017 and the end of January, the system recovered 25 gallons of liquid, an estimated 12 gallons of which were DNAPL.

On January 18, 2018, 12 drums (approximately 550 gallons) of oil-water mixture previously pumped out of the MW-6/MW-13 above ground storage tank were picked up by ACTenviro, Inc. for transport to Tradabe Treatment and Recycling, Inc. in East Chicago, Indiana to undergo fuel blending.

Baseline DNAPL removal as needed to maintain levels below the top of the well sumps was conducted by Anchor QEA during January 2018 in the following wells near the river shoreline.

- MW-18-30
- MW-26U
- MW-34L

- MW-38U
- MW-PW2L
- PW-2L
- PW-6U

The following upland FS related field tasks were in progress during January:

 Weekly measurements of DNAPL presence at Fill WBZ wells MW-43F, MW-44F, and MW-45F have been conducted since August 2017. During January, measurements recorded up to 0.14 feet of DNAPL in the base of well MW-43F; no accumulation of DNAPL within well MW-44F (none recorded to date); and only blebs (not a measurable thickness) of DNAPL were recorded at well MW-45F.

2. ACTIONS SCHEDULED TO BE TAKEN IN THE NEXT MONTH

NW Natural and DEQ technical working group communications and meetings will occur as needed within the next month to discuss ongoing project tasks.

Routine baseline DNAPL measurements and removal will continue as needed to maintain levels below the top of the well sumps in nearshore HC&C-related wells.

Continue technical discussions with DEQ regarding the proposed reinstatement of the +/- 0.05 ft potential error criterion for HC&C water level data.

The groundwater chemistry database fie, updated with the September/October 2017 groundwater sampling event data, will be submitted to DEQ before February 19, 2018.

The HC&C Operational figures for the July – December 2017 period will be submitted to DEQ by February 28, 2018.

In February NW Natural plans to remove sediment that has accumulated in the sumps of extraction wells PW-1U, PW-1Ub, PW-1L, PW-15U, and PW-16U. Extraction well pumps in these wells will be reinstalled near the base of the screen.

The following upland FS related tasks will be in progress:

 A DNAPL sample will be collected for laboratory testing from DNAPL mobility assessment wells MW-43F and MW-44F should measurable thicknesses / sufficient volumes be identified at these locations during February. It is estimated that a minimum thickness of 0.5 feet of DNAPL accumulation will be necessary in order to collect sufficient sample volume for the laboratory.

3. LABORATORY TEST RESULTS RECEIVED DURING THE PREVIOUS MONTH

NW Natural receives test results on a regular basis as a result of routine monitoring related to groundwater quality or as specified by various permit requirements. Additionally, test results are periodically received through implementation of task-specific

investigation activities resulting from agency-approved work plans. These data are provided to DEQ or the permitting authority (if different than DEQ) in accordance with previously approved formats and schedules.

4. PROBLEMS EXPERIENCED DURING THE PREVIOUS MONTH

There were no problems of significance experienced during the previous month.

Should you have any questions, please contact the undersigned.

Rob Ede, R.G.

Principal

Sincerely

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